

## ABSTRACT OF THE DISCLOSURE

A backup power supply for a telephone set that does not use batteries comprises a Electric Double Layer Capacitor ("EDLC") having a charge capacity sufficient to power the control electronics of the set in the event of a power failure and for the brief period of time necessary for the telephone to go off-hook and thereby draw sufficient power from the local loop of a Telco or PBX to place or receive voice calls and recharge the EDLC. The power supply includes circuitry for detecting an incoming call or an instruction to place an outgoing call during a power outage, and for responsively coupling the power of the capacitor to the electronics of the set so that the set can receive or place the call. The power supply further includes circuitry for recharging the capacitor rapidly from both the conventional power supply when it is functioning and from the local service loop when it is not.